

DEC 11 2007

Amendments to the Claims:

Please CANCEL claim 22.

Please AMEND the claims as follows:

1. (currently amended) A method for filtering messages communicated between a cable head end and one or more cable modems, the method comprising:

~~selecting message filtering criteria;~~

~~receiving~~ obtaining a message at the cable head end, wherein the message is received from a cable modem or ~~a message that is to be transmitted to a cable modem;~~

determining whether the message meets filtering criteria; and  
when the ~~received~~ message meets the filtering criteria, copying the ~~received~~ message including ~~at least~~ a payload and sending the copied message including ~~at least~~ the payload to a memory device;

wherein the obtaining, determining, copying and sending steps are performed by a Cable Modem Termination System (CMTS).

2. (Currently Amended) A method as recited in claim 1, further comprising:

when the ~~received~~ message is to be transmitted to a cable modem, forwarding the ~~received~~ message to the cable modem; and

when the ~~received~~ message is received from a cable modem, processing the ~~received~~ message at the cable head end.

3. (Currently Amended) A method as recited in claim 1, wherein the filtering criteria specifies a message type and the ~~received~~ message meets the filtering criteria when the ~~received~~ message has the specified message type.

4. (original) A method as recited in claim 3, wherein the message type is a MAP message.

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5. (Currently Amended) A method as recited in claim 4, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the ~~received~~ message is a MAP message that contains any specified service identifier.

6. (Currently Amended) A method as recited in claim 4, wherein the filtering criteria further specifies one or more MAC addresses and the filtering criteria is met when the ~~received message~~ is a MAP message that contains any specified MAC address.

7. (original) A method as recited in claim 4, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

8. (original) A method as recited in claim 4, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

9. (original) A method as recited in claim 3, wherein the message type is a dynamic service message.

10. (Currently Amended) A method as recited in claim 9, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the ~~received~~ message is a dynamic service message that contains any specified service identifier.

11. (Currently Amended) A method as recited in claim 9, wherein the filtering criteria further specifies a dynamic service message type and the filtering criteria is met when the ~~received~~ message is a dynamic service message that contains the specified dynamic service message type.

12. (original) A method as recited in claim 11, wherein the dynamic service message type is selected from a group consisting of a message for adding, a message for deleting, and a message for changing one or more services.

13. (original) A method as recited in claim 9, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

14. (original) A method as recited in claim 9, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

15. (Currently Amended) A method as recited in claim 1, wherein the filtering criteria specifies one or more service identifiers and the filtering criteria is met when the ~~received~~ message contains any specified service identifier.

16. (Currently Amended) A method as recited in claim 1, wherein the filtering criteria specifies one or more MAC addresses and the filtering criteria is met when the ~~received~~ message contains any specified MAC address.

17. (Currently Amended) A method as recited in claim 1, wherein the filtering criteria specifies one or more access control type parameters and the filtering criteria is met when the ~~received~~ message contains any specified access control type parameter.

18. (Currently Amended) A method as recited in claim 1, wherein the filtering criteria specifies either a downstream or downstream direction and the filtering criteria is met when the ~~received~~-message is associated with the specified direction.

19. (Currently Amended) A method as recited in claim 1, wherein the filtering criteria specifies one or more ports and the filtering criteria is met when the ~~received~~ message is associated with any specified port.

20. (original) A method as recited in claim 1, wherein the memory device forms part of a computer system that is accessible via a computer network.

21. (currently amended) A computer system operable to filter messages communicated between a cable head end and one or more cable modems, the computer system comprising:

one or more processors;

one or more memory, wherein at least one of the processors or the ~~and~~-memory are adapted to:

~~select message filtering criteria;~~

~~receive~~ obtain a message at the cable head end, wherein the message is received from a cable modem or ~~a message that~~ is to be transmitted to a cable modem;

determine whether the message meets filtering criteria; and

when the ~~received~~ message meets the filtering criteria, copy the ~~received~~ message including ~~at least a~~ payload and send the copied message including at least ~~the~~ payload to a memory device;

wherein the computer system is in the form of a Cable Modem Termination System (CMTS).

22. (Cancelled)

23. (Currently Amended) A computer system as recited in claim 21, wherein at least one of the processors or the ~~and~~ memory are further adapted to:

when the ~~received~~ message is to be transmitted to a cable modem, forward the ~~received~~ message to the cable modem; and

when the ~~received~~ message is from a cable modem, process the ~~received~~ message at the cable head end.

24. (Currently Amended) A computer system as recited in claim 21, wherein the filtering criteria specifies a message type and the ~~received~~ message meets the filtering criteria when the ~~received~~ message has the specified message type.

25. (original) A computer system as recited in claim 24, wherein the message type is a MAP message.

26. (Currently Amended) A computer system as recited in claim 25, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the ~~received~~ message is a MAP message that contains any specified service identifier.

27. (Currently Amended) A computer system as recited in claim 25, wherein the filtering criteria further specifies one or more MAC addresses and the filtering criteria is met when the ~~received~~ message is a MAP message that contains any specified MAC address.

28. (original) A computer system as recited in claim 25, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

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29. (original) A computer system as recited in claim 25, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

30. (original) A computer system as recited in claim 24, wherein the message type is a dynamic service message.

31. (Currently Amended) A computer system as recited in claim 30, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the received message is a dynamic service message that contains any specified service identifier.

32. (Currently Amended) A computer system as recited in claim 30, wherein the filtering criteria further specifies a dynamic service message type and the filtering criteria is met when the received message is a dynamic service message that contains the specified dynamic service message type.

33. (original) A computer system as recited in claim 32, wherein the dynamic service message type is selected from a group consisting of a message for adding, a message for deleting, and a message for changing one or more services.

34. (original) A computer system as recited in claim 30, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

35. (original) A computer system as recited in claim 30, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

36. (Currently Amended) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more service identifiers and the filtering criteria is met when the received message contains any specified service identifier.

37. (Currently Amended) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more MAC addresses and the filtering criteria is met when the received message contains any specified MAC address.

38. (Currently Amended) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more access control type parameters and the filtering criteria is met when the received message contains any specified access control type parameter.

39. (Currently Amended) A computer system as recited in claim 21, wherein the filtering criteria specifies either a downstream or downstream direction and the filtering criteria is met when the received message is associated with the specified direction.

40. (Currently Amended) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more ports and the filtering criteria is met when the received message is associated with any specified port.

41. (original) A computer system as recited in claim 21, wherein the memory device forms part of a second computer system that is separate from the first computer system and that is accessible via a computer network.

42. (currently amended) A computer program product for filtering messages communicated between a cable head end and one or more cable modems, the computer program product comprising:

at least one computer readable medium;

computer program instructions stored within the at least one computer readable product configured to cause a computer system to:

~~select message filtering criteria;~~

obtain receive a message at the cable head end, wherein the message is received from a cable modem or ~~a message that~~ is to be transmitted to a cable modem;

determine whether the message meets filtering criteria; and

when the ~~received message~~ meets the filtering criteria, copy the ~~received~~ message including at least a payload and send the copied message including the at least payload to a memory device.

43. (Currently Amended) A computer program product as recited in claim 42, wherein the filtering criteria specifies a message type and the ~~received message~~ meets the filtering criteria when the ~~received message~~ has the specified message type.

44. (original) A computer program product as recited in claim 43, wherein the message type is a MAP message.

45. (original) A computer program product as recited in claim 44, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

46. (original) A computer program product as recited in claim 44, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

47. (original) A computer program product as recited in claim 43, wherein the message type is a dynamic service message.

48. (Currently Amended) A computer program product as recited in claim 42, wherein the filtering criteria specifies one or more service identifiers and the filtering criteria is met when the ~~received~~ message contains any specified service identifier.

49. (Currently Amended) A computer program product as recited in claim 42, wherein the filtering criteria specifies one or more MAC addresses and the filtering criteria is met when the ~~received-message~~ contains any specified MAC address.

50. (Currently Amended) A computer program product as recited in claim 42, wherein the filtering criteria specifies one or more access control type parameters and the filtering criteria is met when the ~~received-message~~ contains any specified access control type parameter.

51. (Currently Amended) A computer program product as recited in claim 42, wherein the filtering criteria specifies either a downstream or downstream direction and the filtering criteria is met when the ~~received-message~~ is associated with the specified direction.

52. (Currently Amended) A computer program product as recited in claim 42, wherein the filtering criteria specifies one or more ports and the filtering criteria is met when the ~~received~~ message is associated with any specified port.

53. (original) A computer program product as recited in claim 42, wherein the memory device forms part of a computer system that is accessible via a computer network.

54. (currently amended) An apparatus for filtering messages communicated between a cable head end and one or more cable modems, the apparatus comprising:

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~~means for selecting message filtering criteria;~~

means for obtaining ~~receiving~~ a message at the cable head end, wherein the message is received from a cable modem or a ~~message that~~ is to be transmitted to a cable modem;

means for determining whether the message meets filtering criteria; and

means for copying the ~~received~~ message including at least a payload and sending the copied message including at least the payload to a memory device when the received message meets the filtering criteria.

Please ADD new claims as follows:

55. (New) The method as recited in claim 1, further comprising:  
selecting the message filtering criteria.

56. (New) The method as recited in claim 55, wherein the selecting step is performed at the CMTS.

57. (New) The computer system as recited in claim 21, wherein the memory device is coupled to the CMTS.

58. (New) The computer system as recited in claim 21, wherein the memory device is separate from the computer system.

59. (New) The computer system as recited in claim 21, wherein the memory device is accessible via a computer network.



60. (New) The computer system as recited in claim 21, wherein the memory device is coupled to a monitoring station.